F1-032

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Cache Creek Conservancy

July 26, 1997

Ms. Kate Hansel
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, CA 95814

Dear Ms. Hansel:

Enclosed are copies of our proposal for CALFED Category III funding entitled "*Tamarix* Control on Cache Creek: Monitoring, Removal and Revegetation, and Outreach". This proposal is the outgrowth of meetings of the Cache Creek Stakeholders and its *Tamarix* working group. The need to control *Tamarix* along Cache Creek is urgent, as evidenced not only by our proposal but also by the attached letters of support from elected officials, scientists, agencies and conservation organizations.

Thank you for consideration of our request for funding.

Sincerely,

Ann Brice

Ann Brice, Ph.D.
Executive Director

34490 County Road 25, Woodland, CA 95695 *Phone/Fax: (916) 661-1070*

I. EXECUTIVE SUMMARY

a. TITLE: *Tamarix* Control on Cache Creek: Monitoring, Removal and Revegetation, and Outreach

APPLICANT: Cache Creek Conservancy

b. PROJECT DESCRIPTION AND PRIMARY BIOLOGICAL/ECOLOGICAL OBJECTIVES

Tamarix is a non-native highly invasive weed that has been targeted as a stressor "capable of causing enormous damage to California riparian communities" in the CALFED Bay-Delta Program's "Ecosystem Restoration Program Plan, Volume I (June 1997). *Tamarix* has indirectly changed the hydrograph and the channel morphology of Cache Creek, as well as directly impacted riparian zone vegetation and regeneration potential, increased salinity, decreased biodiversity, and increased the wildfire fuel load. Our proposed project will enhance and restore in-stream aquatic, shaded riverine, and seasonal wetland habitats in the Cache Creek Watershed by establishing a program to control the spread of *Tamarix* and encourage revegetation with native riparian species. The Cache Creek Watershed supports riparian-associated wildlife, such as red and yellow legged-frogs, western pond turtle, various native fish species, Swainson's hawk, bank swallow, and other migratory birds, all of which will benefit by the removal of *Tamarix* and augmentation of native plant species along the creek. Controlling the encroachment of *Tamarix* on Cache Creek will play a critical role in preventing it from threatening the Bay-Delta ecosystem.

The focus of this proposal is fourfold: 1) to document the extent and rate of encroachment of the *Tamarix* invasion, 2) to implement a focused research and demonstration project for *Tamarix* control and replacement, 3) to develop a locally-adapted protocol for *Tamarix* control and replacement on three different reaches of Cache Creek, thus providing broad ecosystem benefits to the watershed as a whole and 4) to conduct an outreach program to educate the community, especially the creekside landowners, about the adverse effects of *Tamarix* and the solutions that will have been developed in this project.

c. APPROACH/TASKS/SCHEDULE

This project will determine the extent of the *Tamarix* infestation in Cache Creek, the rate of invasion, and, through a demonstration project, reduce the surface area covered by *Tamarix*. The demonstration project will quantitatively compare two different methods for *Tamarix* removal (basal-bark vs. cut-stump) and two different methods of restoration (manual vs. spontaneous). A cost-benefit analysis of the above methods will provide a reach-specific protocol for *Tamarix* removal and replacement. The protocol will be used as part of the public outreach to assist creekside landowners throughout the watershed. The project will be divided into nine tasks described in the proposal and will be completed in three years.

d. JUSTIFICATION FOR PROJECT AND FUNDING BY CALFED

Tamarix is a noxious, non-native shrub that has invaded the waterways of the southwestern U.S. including southern California. It is now gaining a foothold in northern California, especially on Cache Creek. This project will begin a control program that can be implemented through-out the watershed to stop the spread of *Tamarix* before it becomes a monoculture on the creek and moves into the Bay-Delta. The proposed project will be carried out wholly within the ecological zone of concern as defined by CALFED.

e. BUDGET COSTS AND THIRD PARTY IMPACTS

The entire budget request is $344,091, more than one-quarter of which will be used to employ members of the California Conservation Corps to carry out the proposed tasks. The third party impacts will be positive and include assisting other projects involved in ecosystem restoration and *Tamarix* control along Cache Creek and other waterways within the Bay-Delta ecosystem.

f. APPLICANT QUALIFICATIONS

The mission of the Cache Creek Conservancy is to promote the restoration of lower Cache Creek. The Conservancy's board of directors includes local elected officials, creekside landowners, farmers, members of the aggregate industry, environmental professionals and community leaders. Ann Brice, Executive Director, has a Ph.D. in Ecology and many years experience in research, project management, and student/volunteer and staff supervision.

The Office of Mine Reclamation staff that will be involved in the project include Gail Newton (Senior Reclamation Specialist) with over 17 years experience in revegetation, restoration and biostatistics, Mary Ann Showers (Environmental Specialist III) with over 15 years experience in plant ecology and revegetation, and Karen Wiese (Plant Ecologist) with over 15 years experience in plant pathology and revegetation.

David Morrison, Resource Management Coordinator for the Yolo County Community Development Agency, is in charge of implementing the county's Cache Creek Area Plan and has over 7 years experience in environmental planning and permitting.

g. MONITORING AND DATA EVALUATION

Monitoring includes comparative vegetative measurements on treatments in a fully-randomized block design. These data will be analyzed using a multivariate ANOVA. Results will be compared/contrasted with data on *Tamarix* eradication and monitoring from other riparian ecosystems where it has been implemented. Peer review will be provided through the California Exotic Pest Plant Council and Joe DiTomaso, Ph.D., UC Davis Cooperative Extension, Non-crop Weed Ecologist. Monitoring the rate and extent of *Tamarix* invasion will be determined by aerial photography and analyzed through the use of a GIS program. This monitoring will extend beyond the life of the grant.

h. LOCAL SUPPORT/COORDINATION WITH OTHER PROGRAMS/ COMPATIBILITY WITH CALFED OBJECTIVES

The proposed project is the product of meetings of the *Tamarix* working group, composed of members from the larger Cache Creek Stakeholders organization. This proposal is the first action of the stakeholders. In addition to the principal collaborators from Cache Creek Conservancy, the Office of Mine Reclamation and the Yolo County Community Development Agency, the group includes local landowners, the Natural Resources Conservation Service, Yolo County Flood Control and Water Conservation District, the Yolo County Resource Conservation District, and the Yolo County Agricultural Commissioner, and the Bureau of Land Management. See attached letters of support.

The project implements several of the CALFED objectives outlined in the Ecosystems Restoration Program Plan Executive Summary and Tables (April 1997). Table 8 of the plan lists the following targets "Restore riparian vegetation along Cache Creek..." and "Reduce populations of invasive non-native plant species that compete with the establishment and succession of native riparian vegetation along Cache Creek..."

II. TITLE PAGE

a. TITLE: *Tamarix* Control on Cache Creek: Monitoring, Removal and Revegetation, and Outreach

b. APPLICANT INFORMATION:

Cache Creek Conservancy
Ann Brice, Executive Director
34490 County Road 25
Woodland, CA 95695

phone: 916-661-1070
fax: 916-661-1070
e-mail: pandion@yolo.com

c. TYPE OF ORGANIZATION/TAX STATUS: Independent nonprofit corporation/501(c)3

d. TAX IDENTIFICATION NUMBER: 1959467

e. TECHNICAL AND FINANCIAL CONTACT PERSON: Ann Brice, Cache Creek Conservancy

f. PARTICIPANTS/COLLABORATORS IN IMPLEMENTATION:

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Yolo County Community Development Agency
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g. RFP PROJECT GROUP TYPE: Other Services

III. PROJECT DESCRIPTION

a. PROJECT DESCRIPTION AND APPROACH

The Cache Creek Conservancy and its collaborators recognize the great damage an invasive, non-native plant species like *Tamarix* (also commonly called Tamarisk or Salt Cedar) can inflict on a riparian ecosystem. We propose a) to implement a demonstration project to treat and remove *Tamarix* and to determine when and if manual replacement with native species is needed, b) to document the extent and rate of encroachment of the *Tamarix* invasion, c) to develop a reach specific protocol for *Tamarix* control to be used by landowners in Cache Creek and other watersheds, and d) to implement a community education program to explain the adverse effects of *Tamarix* and how individual landowners can help control its spread.

b. PROJECT LOCATION

Demonstration sites will be located within the Cache Creek watershed in Yolo County. Specifically, this project focuses on the area of Cache Creek where the majority of *Tamarix* infestation has been documented to occur, as determined by aerial photography. The project area generally lies between the towns of Rumsey and Yolo, as shown on the attached map (see Attachment A). Within this area, three demonstration sites will be chosen. The areas of treatment lie wholly within CALFED's ecological zone of concern.

c. EXPECTED BENEFITS

Priority Habitats: The project will focus on improving riparian areas associated with Cache Creek, including: instream aquatic habitats, shaded riverine aquatic habitats, and seasonal wetland and aquatic habitats.

Priority Species: The project is expected to benefit a number of key and priority species, including the following:

Migratory Birds: Tamarix eradication will improve habitat for migratory birds. As *Tamarix* replaces native vegetation, breeding densities of riparian bird species declines (DiTomaso 1997). Waterfowl, frugivores, and insectivores almost completely avoid *Tamarix* (Shrader 1977; Brotherson and Field 1987; Kerpez and Smith 1987).

Swainson's Hawk: Cache Creek has one of the largest concentrations of Swainson's hawk nest sites in California. One of the critical concerns for this species is the lack of nesting trees. *Tamarix* provides no nesting opportunities, while cottonwood and willow forests greatly enhance the number of potential nest sites.

Bank Swallows: Other than cicadas and bees, very few insect species are known to use *Tamarix* as cover or forage (Egan et al. 1993). Replacement of *Tamarix* with native riparian species will increase the density and diversity of insects along Cache Creek, which will provide improved food supplies for nesting bank swallows and other migratory insectivores.

Native Resident Fish and Amphibians: Reestablishing cottonwood and willow communities will increase shaded habitat and improve the availability of insects for native fish species, yellow and red-legged frogs and western pond turtles.

Primary Stressors: Once widely recommended for use in erosion control, *Tamarix* has become increasingly recognized as a highly destructive species that results in a wide range of adverse environmental impacts, as follows:

Alteration of Flows: Effective *Tamarix* control would provide additional water supplies for riparian habitat and wildlife located downstream. Water availability may be increased by as much as two acre-feet for each acre of *Tamarix* removed (Weeks et al. 1987).

Channel Form Changes: Removal of the *Tamarix* would provide Cache Creek with a more dynamic riparian system that favors native vegetation. The erosion resistant nature of *Tamarix* encourages sediment deposition, which narrows the watercourse and increases flow velocity (DiTomaso 1997). This may further inhibit the riparian zone, since the potential for erosion is increased by faster flows, while the elevation of the saturation zone decreases with the degrading streambed.

Decreased Water Quality: The management of *Tamarix* will reduce both the amount of salt being introduced into the watershed and its potential impact on freshwater species. *Tamarix* draws salts from within the soil profile and deposits them on the soil surface, preventing the germination of competing species (Kerpez and Smith 1987).

Undesirable Species Interactions: *Tamarix* infestation has serious consequences for the long-term survival of cottonwood-willow communities by severely limiting the number of germination sites for native riparian species. Reestablishing cottonwood-willow communities will greatly increase the amount of shade along Cache Creek, which, in turn, will provide a natural means of reducing existing stands of *Tamarix* and constraining further infestation.

Increased Wildfire Potential: Removal of *Tamarix* decreases the potential for wildfire along Cache Creek, especially in the Capay Valley which is designated as a State High Fire Risk Area. Studies have shown that fires burn in *Tamarix*-dominated areas along the Colorado River at a rate of 35 percent, compared with 2 percent for native communities during the same period (Busch 1995).

Primary and Secondary Benefits: *Primary Benefits*: Controlling *Tamarix* is expected to have a number of significant benefits, including: 1) Reducing the populations of invasive non-native plant species; 2) Increasing habitat values for riparian associated wildlife; 3) Improving the natural reestablishment and succession of native riparian vegetation in floodplains; and 4) Decreasing channel flow restrictions.

Secondary Benefits: In addition to the direct benefits discussed above, the project will indirectly have a positive impact on a number of goals established under the Ecosystem Restoration Program Plan. These secondary benefits include: 1) Increase shaded riverine aquatic habitat for fish; 2) Protect, restore, and maintain watershed health; 3) Develop cooperative approaches to land management; 4) Increase water availability; 5) Improve surface water quality; and 6) Reduce wildfire potential.

Potential Benefits to Third Parties: This project will coordinate with and promote a number of local initiatives. See Section IV-c for details.

Benefits to Other Ecosystem Restoration Programs: This project is compatible with and will actually implement portions of the Yolo County Cache Creek Resources Management Plan, the U.S. Army Corps of Engineers Cache Creek Environmental Restoration Plan, and the goals of the Cache Creek Conservancy. It will also work in tandem with other weed eradication efforts, such as those of Team Arundo del Norte.

Consistency with Non-ecosystem Objectives: Although it provides numerous benefits for improving native wildlife and plant communities, the control of *Tamarix* also advances several non-ecosystem objectives, as described below:

Provide Good Water Quality: *Tamarix* secretions include magnesium, aluminum, sulfur, boron, copper, chloride, silica, zinc, lithium, barium, and numerous others (Story and Thomson 1994). A reduction in the amount of *Tamarix* would allow potential contaminants to remain in the soil layer and would inhibit their introduction into the watershed.

Reduce Disparity Between Water Supplies and Beneficial Uses: As a facultative phreatophyte, *Tamarix* draws moisture from the saturated zones below the water table and is capable of extracting moisture from the less saturated zones in areas with deeper water tables (Ball et al. 1994; Gay and Hartman 1982). With evapotranspiration rates of 2.3 to 2.6 feet per year, the systematic control and management of *Tamarix* would increase available water supplies for beneficial uses.

Reduce the Risk From Failure of Delta Levees: Sediment deposition associated with *Tamarix* can substantially reduce channel capacity, increasing both the incidence of flooding and the area of flooding.

Levees may be overtopped, increasing the likelihood of failure. A program to control *Tamarix* upstream would reduce the potential for infestation in the Delta.

d. BACKGROUND AND BIOLOGICAL/TECHNICAL JUSTIFICATION

Tamarix History and Earlier Approaches to Its Control on Cache Creek: *Tamarix*, a Eurasian native, was introduced to the US in the 1800s. It became established in the southwest along streams by the 1940s and is the dominant plant in many southwestern riparian ecosystems. There are now eight species established in the US with *Tamarix parviflora* being the species found along Cache Creek (DiTomaso, *pers. com.*). By 1996 it had earned a spot on the Nature Conservancy's list entitled "America's Least Wanted--a line-up of the country's twelve meanest environmental scoundrels" (Flick and Furlow 1996). The California Exotic Pest Plant Council has designated *Tamarix* as one of the most ecologically damaging species in California and has funded pamphlets and workshops to educate people about its negative aspects (CalEPPC 1996). See Section III-c for a discussion its ecology and effects on riparian ecosystems.

One of the only organized eradication efforts along Cache Creek occurred in 1992 when the Yolo County Flood Control and Water Conservation District (YCFCWCD) cleaned out two miles of *Tamarix* infested stream channel upstream of the Yolo Bypass near Interstate 5. Nearly $40,000 was spent hand-removing the vegetation. Unfortunately YCFCWCD was not aware of effective *Tamarix* eradication methods, and, within three years, the population had re-established and even expanded.

In the spring of 1995 a group of individuals including creekside landowners and representatives from the NRCS, Yolo County Resource Conservation District, Yolo County Agricultural Commissioner and the YCFCWCD met regularly to create a program that would increase the level of public awareness regarding the negative impacts of *Tamarix*. It was also the group's intention to establish several areas along the creek where eradication could be implemented. The task force went on to lobby successfully for the removal of *Tamarix* from the preferred plant palette for erosion control maintained by the NRCS, however, its efforts have dissipated over the past two years.

Basis for Expected Benefits of the Proposed Approach: Several recently completed environmental reports on Cache Creek recommend immediate control of *Tamarix* along the creek (US Army Corps of Engineers 1995, US Fish and Wildlife Service 1995, Yolo County Community Development Agency 1995). Given this technical mandate, a number of people attending the Cache Creek Stakeholders meetings formed a *Tamarix* working group in the winter of 1997 to revive the interest in control of this invasive weed. This proposal is a synthesis of their efforts. See Attachment D for letters of support.

Successful management plans for *Tamarix* eradication and replacement have been implemented in the southwestern US and southern California (Barrows 1993, Sudbrock 1993, Neill 1997) and will serve as models where appropriate for the Cache Creek project. Monitoring is essential to assess the success of a project such as ours. Using aerial maps and the Yolo County GIS, the extent and rate of *Tamarix* infestation will be monitored. Similar monitoring techniques have been used in other vegetation mapping projects. "Stakeholder buy-in" is essential for a viable watershed-wide control program. The development of a protocol guide for Cache Creek landowners throughout the watershed has not been described elsewhere but is a centerpiece for this project and will serve as a model for future programs.

See Attachment C for supporting documentation (Literature Cited).

e. SCOPE OF WORK

1. **Project Management/Coordination:** The Conservancy will provide all technical and administrative services to assure that all contract tasks are completed within budget and on schedule. These include: general administration, accounting, budgeting, task coordination, interface with other contracts, subcontractors, project review, and quarterly and final reporting. The quarterly progress reports will describe activities undertaken and accomplishments of each task during the quarter, milestones achieved,

and any problems encountered in the performance of the scope of work. Sufficient detail will be provided to be used as a basis for payment of invoices and will be translated into the percent of each task completed for the purpose of calculating invoice amounts. The draft final report will contain a summary of all progress of the project tasks and will be completed within the final quarter of the grant. This draft report will be circulated for peer review. The final report will consist of the draft report plus and additions/comments/ corrections received during peer review. The final report will provide a cost estimate for eradication and maintenance, an analysis of all data, and a decision-making guide for a cost-effective, watershed-wide treatment strategy.

2. **Watershed Education**: An essential component of any *Tamarix* control program is community, and particularly creekside landowner, support. Concurrent with our experimental project we will initiate an educational program that will include public forums, local media coverage, flyers, articles in agricultural magazines and on-site visits with landowners to discuss the risks of *Tamarix* invasion, how to remove it, and what the replacement alternatives and costs are. The results of the proposed demonstration project will compare various eradication techniques on different sites, yielding a decision-making guide that will be disseminated throughout the watershed.

3. **Vegetation and Wildlife Documentation** : By analysis of historical and current aerial photos, we will determine the extent of native riparian vegetation versus *Tamarix* infested areas along Cache Creek. This information will be analyzed with a GIS system to determine the rate of encroachment into the watershed. Use of the GIS system will allow for the correlation of monitoring data with other watershed-based variables, including land use, flooding, and soils. The analysis will result in GIS coverage of the watershed and will be used as part of the site selection for implementation of Section III-e-7. We will also survey the diversity and abundance of bird life at the various sites before the experimental protocol is implemented and semi-annually throughout the three years of the grant.

4. **Reach Characterization**: Eradication methods may vary based on site-specific edaphic and vegetation characteristics; therefore, each reach will be characterized based on an "average" site. The average site will be chosen based on data obtained under Task 3 and data obtained under this task.

4.1 Soil Sampling: Representative areas within each reach will be chosen for sampling to determine average soil characteristics. Soil sampling will follow standard guidelines and will include the following analyses: soil texture, percent organic matter, pH, CEC (cation exchange capacity), nutrients (N, P, K, Ca, Mg, Fe, etc.), EC (electrical conductivity, a measurement of salinity), SAR (sodium absorption ratio), targeted heavy metals (Ni, Hg, B), and sodium (Na).

4.2 Vegetation Analysis: Representative areas within each reach will be chosen for sampling to determine average vegetation characteristics for both infested areas and native stands. Vegetation sampling will follow standard methodologies and will include species composition, cover, and density.

5. **Site Selection and Formal Agreements with Property Owners**: *5.1 Site Selection:* Within each reach, the demonstration site will be selected based upon the following criteria: 1) Property owner's written agreement for participation; 2) Amount of infestation by *Tamarix* for that reach of the creek; 3) Amount of extant native plant species for that reach; 4) Soil chemistry for that reach; 5) Access; 6) Minimum of two and one-half acres available for treatment; 7) Off-site and third party considerations (proximity to organic farms, unusually dense *Tamarix* stand adjoining, etc.)

5.2 Formal agreements: Formal agreements will be obtained from each property owner involved in the implementation phase of this grant to prevent possible removal of native revegetation or interference with the demonstration sites.

6. **Permitting**: Permits will be required for the following activities: 1) Spray permits will be obtained from the Yolo County Agricultural Commissioner, for pesticide application in the removal and maintenance of *Tamarix*, before work begins and 2) Where *Tamarix* will be removed through stumping,

the brush will be piled up and burned on site, which will require the prior approval of burn permits from the Yolo-Solano Air Quality Management District.

7. **Propagation of Native Species:** Propagules from native riparian species will be collected from each reach to be used during implementation. This task must take place during the correct season for each species and for each type of propagule; therefore, scheduling will remain flexible. For example, willow cuttings will be gathered during the dormant season (November-February), and just prior to implementation; while valley oak acorns will be gathered in the fall and propagated by the California Department of Forestry Nursery in Davis for outplanting the following fall.

8. *Tamarix* **Eradication Implementation**: The eradication program will take place in three discrete phases: design, baseline monitoring, and implementation. Treatment with herbicide and removal is now the demonstrated method of controlling *Tamarix* in the southwestern U.S. (Neill 1997), but these techniques have not been applied systematically in any northern California riparian ecosystems. We will establish test plots at three sites along Cache Creek. There will be five 0.5 acre test plots at each site. One plot will serve as a control with no treatment. The controls and treatment plots within and between sites will be quantitatively compared over the three year life of the grant.

8.1 Final Experimental Design: The final experimental design will provide the basis for implementation and will be peer reviewed prior to implementation. Two general treatments and two revegetation regimes will be tested on each of the reaches. The general treatments will compare the use of herbicide through the basal bark method versus the cut-stump method. The revegetation regimes will be spontaneous vegetation versus manual replanting of native vegetation following treatment. This conceptual design will result in a 2 X 2 block design over an area not less than two acres. In addition, a control area (no treatment) will be identified for each reach.

8.2 Pre-Project Monitoring (Baseline): Soil and vegetation sampling and analyses (similar to that described under Task 4) will be done prior to project implementation on each area for treatment.

8.3 Implement Experimental Treatments and Maintain Treatment Areas: Two plots will receive herbicide using the cut stump method for application and two using the basal bark method (see Neill 1997 for details of the two methods). After the *Tamarix* has been eradicated in the treatment plots at each site, one plot with the cut stump method of eradication and one plot with the basal bark method will be replanted with native vegetation appropriate to the site. Methodologies for replanting will be according to standard protocols for each species. The remaining plot from each treatment will be left to revegetate naturally.

Following implementation we will first monitor and then spot spray herbicide on any emerging *Tamarix* in the study plots, and we will water the manually revegetated plots.

A cost accounting of all man-hours spent on each treatment area (including maintenance) will be kept. This data will be used in a cost-benefit analysis of the chosen eradication program for each reach.

9. **Post-Implementation Monitoring and Data Evaluation:** The treatment areas and controls will be monitored quarterly following implementation.

9.1 Monitoring of Treatments and Controls: Vegetation and soil data will be collected once every six months. Within each block, the density, height, and percent cover by each species (native and exotic) will be recorded. Recruitment of native species will be noted. In addition, the amount of open ground, rock, and debris will be recorded. If the treatment included native planting, then individual plants will be marked for more intensive horticultural monitoring. Soil monitoring will be similar to that described in Task 4. Maintenance monitoring will take place quarterly.

9.2 Monitoring of Wildlife: The results of bird monitoring will be compared within and among sites, with the pre-experiment survey, and with data from other *Tamarix* removal projects.

9.3 Data Analysis: Monitoring data from each block will be quantitatively compared, yielding the best proposed strategy for that block. The implementation and maintenance costs for each block will be compiled.

9.4 Data Evaluation and Peer Review: Vegetation data will be evaluated for sustainability and invasibility to determine if those native ecological processes have begun on the treatment areas. The results of the vegetation and cost data will be put forth in a draft plan which will be circulated for review as described in Task 1.

f. MONITORING AND DATA EVALUATION

Monitoring includes comparative vegetative measurements on treatments in a fully-randomized block design. These data will be analyzed using a multivariate ANOVA. Results will be compared/contrasted with data on *Tamarix* eradication and monitoring from other areas where it has been implemented. Peer review will be provided through the California Exotic Pest Plant Council and Joe DiTomaso, Ph.D., UC Davis Cooperative Extension, Non-crop Weed Ecologist. In addition we will continue to monitor the rate and extent of *Tamarix* invasion, as presented in Section III-c-3. This monitoring will extend beyond the life of the grant.

See Section III-e-9 for details of the monitoring and data evaluation protocol.

g. IMPLEMENTABILITY

Status of Compliance with Applicable Regulations: All local, state, and federal regulations will be fulfilled throughout the course of this project. See Section III-c-6 for specific permits needed.

Easements and Encumbrances: No easements or real property will be acquired as a result of this project. Agreements will be executed between the Conservancy and the participating owners to prevent the intentional removal of any native vegetation established within the demonstration sites.

Environmental Compliance: The project will not result in any earth-moving activities, surface water discharges, loss of native vegetation, taking of sensitive species, or other adverse environmental impacts. Consequently, it may be considered exempt from both the California Environmental Quality Act and the National Environmental Protection Act.

Sensitivity to Hydrologic/Climatic Conditions: Demonstration sites have been selected at different locations in order to account for a range of environmental conditions. Revegetation materials will be taken from the immediate area, so that plantings will already be adapted to local conditions. Soil testing will ensure that proposed revegetation methods are appropriate for the site-specific conditions.

Local Support, Outreach, and Participation: Letters of support for this project have been provided in Attachment D. An effective *Tamarix* control program requires outreach to landowners throughout the watershed. See Section III-e-2 for an outline of the education program. We will be assisted in this effort by local agencies including the Yolo County Agricultural Commissioner, the Yolo County Resource Conservation District, the Natural Resources Conservation Service, the Yolo County Flood Control and Water Conservation District and the Bureau of Land Management.

Land Use Conditions and Changes: The three demonstration sites will be located on the high banks and gravel bars of Cache Creek. *Tamarix* removal and native revegetation will be performed by hand and will not require any public works construction activities. The intent of this project is to avoid expensive control methods and develop easily implemented solutions for landowners to use in managing *Tamarix*.

Assessment of Hazardous Materials Conditions: None of the demonstration sites are included on the state list of hazardous sites. Contracts will be limited to licensed pesticide applicators. *Tamarix* control will rely on the use of Rodeo (glyphosate, Monsanto Co.), registered in California for aquatic use.

Cultural Impacts: No excavation is proposed as a part of this project, and *Tamarix* removal and revegetation will be limited to the active floodplain. It is not expected that any cultural and/or historical artifacts will be disturbed. According to records maintained by the Yolo County Historical Advisory Committee, no historic structures or features, or areas of religious significance are located within the demonstration sites.

IV. COSTS AND SCHEDULE TO IMPLEMENT PROPOSED PROJECT

a. BUDGET COSTS

Amount Requested

The total budget request is $344, 091.

Explanation of Cost Breakdown Table

See Attachment B-Table 1 for a cost breakdown and Table 1a for the total budget request. The two primary subcontracts are with Yolo County, Community Development Agency and the CA Department of Conservation, Office of Mine Reclamation, and their budgets are itemized separately. The service contract category includes funds for labor and plant propagation. The miscellaneous/direct costs category includes funds for 1) office supplies, postage, printing, mileage, etc. and 2) education materials and programs.

Need for CALFED Funding

CALFED funding is essential to implement this project, and the proposal fits completely within the guidelines of requests appropriate for CALFED support. We might be able to complete certain sections of the grant proposal with other financial sources over time but would lose the integrated nature and timeliness of the proposed tasks. We hope that there will be funding available in future years to initiate larger scale *Tamarix* removal , replacement and monitoring programs on Cache Creek, but we believe this demonstration project is the proper first step.

In-Kind Services

Although we have no matching funds, we are providing several services/products which will directly benefit the grant, including:

-use of a portable surveying station from DOC ($20,000 replacement value)
-use of soil analysis equipment from DOC ($6,000 replacement value)
-use of Yolo County's GIS (not feasible to calculate value)
-use of spring 1997 aerial photos of Cache Creek from Cache Creek Conservancy and Yolo County ($1,200 replacement value)
-plans to continue monitoring the vegetation in the study area beyond the grant period with funds from Cache Creek Conservancy and Yolo County Community Development Agency.

b. SCHEDULE MILESTONES

See Attachment B-Table 2 for an outline of schedule milestones and responsibilities of involved parties.

c. THIRD PARTY IMPACTS

The proposed grant will positively impact the following local projects:

-The Cache Creek Stakeholders, the local group which initiated the proposal process.
-A *Tamarix* control program to be initiated by the U.S. Bureau of Land Management in the upper watershed next year.
-Ongoing channel maintenance activities undertaken by the Yolo County Flood Control and Water Conservation District.
-Efforts by the U.S. Natural Resources Conservation Service, the Yolo County Resources Conservation District, and the Yolo County Agricultural Commissioner to educate landowners along the creek regarding the problems of *Tamarix*.
-The Cache Creek Environmental Restoration Study, administered by the U.S. Army Corps of Engineers, to restore riparian habitat in the lower watershed.

V. APPLICANT QUALIFICATIONS

ORGANIZATION OF STAFF

Ann Brice of the Cache Creek Conservancy will be in charge of the project. She will assume responsibility for grant administration and overall project management. She will coordinate and oversee the subcontractors and implement the education and wildlife monitoring portions of the grant. We are asking for exemptions from the subcontractor bidding process for David Morrison of Yolo County and Gail Newton of the Department of Conservation. Both have taken part in the Cache Creek Stakeholders and the *Tamarix* working group meetings from their inception and have participated fully in the proposal design and writing. Both have qualifications that make them uniquely suited for this particular project. See their biosketches below. We chose to have a single organization, Cache Creek Conservancy, as the grant applicant for simplicity of process. We will subcontract with David Morrison's office for site selection, vegetation monitoring including the use of the county's GIS, the permitting and other activities listed in Table 1. Gail Newton and her office will primarily be in charge of site characterization, *Tamarix* removal and replacement, and post-implementation monitoring and data evaluation. The California Conservation Corps will be used as a source of labor, and the Davis Field Station of the California Department of Forestry will grow plants for the manual revegetation plots.

See Table 2 for a breakdown of individual responsibilities.

Biosketches

Ann Brice: Ann has been Executive Director of the Cache Creek Conservancy since its founding in January 1996. Before returning to graduate school in the early 1980s, Ann spent several years as the outreach/education director for various non-profit organizations. After receiving a Ph.D. in Ecology from UC Davis in the late 1980s, she became the Coordinator of the Psittacine (parrot) Research Project there, where, for seven years, she conducted research, supervised students and staff, edited a newsletter, and managed fund raising efforts. Her most recent grant was a $150,000 U.S. Agency for International Development science and technology grant for parrot field research in Guatemala. As the principal investigator, she designed protocols, managed staff, dealt with Guatemalan permits and authorities, and analyzed and published data. She received her undergraduate degree from Brown University in anthropology and a master's degree from Simmons College, Boston, in Urban Teaching.

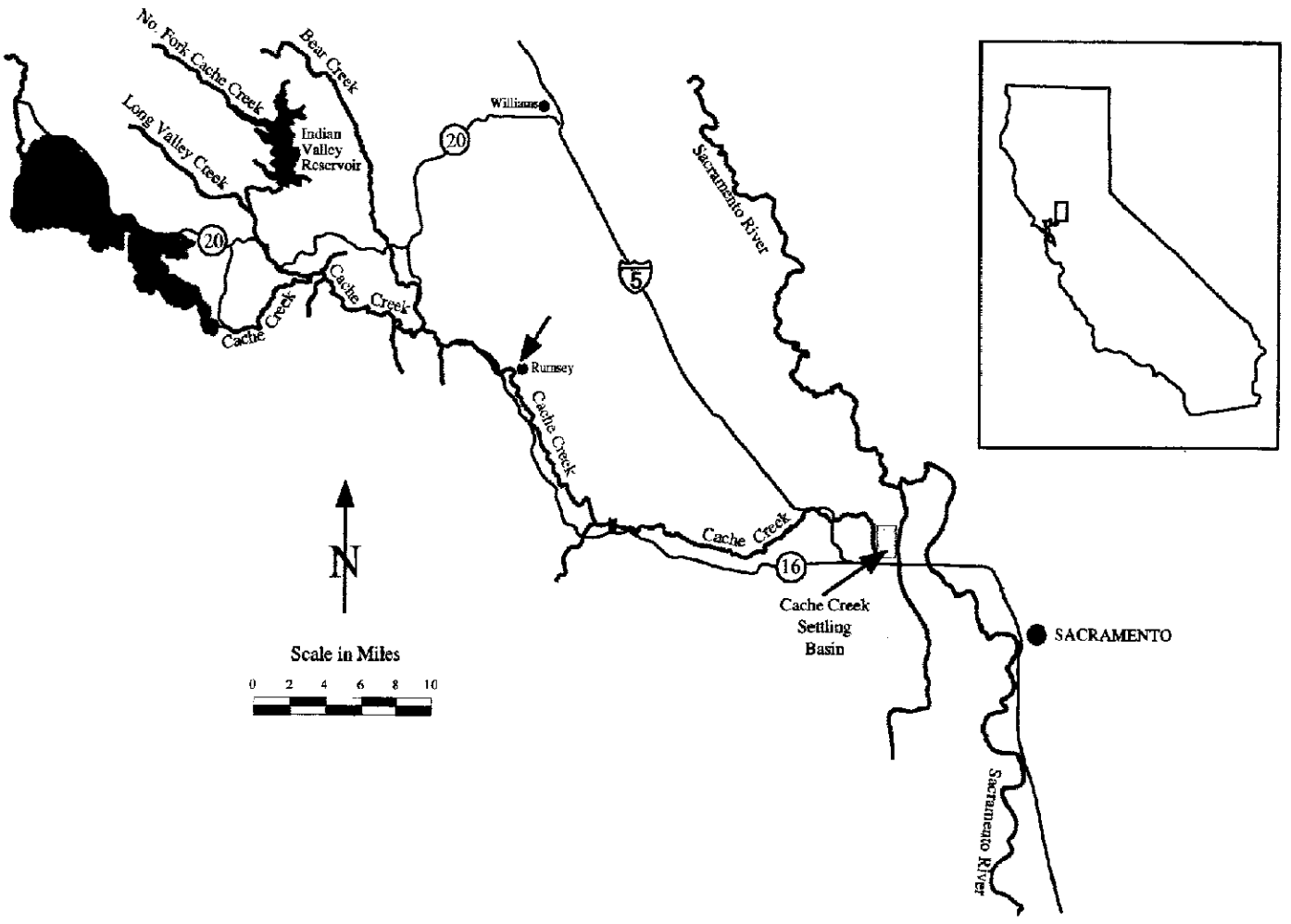
Gail Newton: Gail has over 17 years experience in revegetation of California native habitats. She currently manages the Environmental Services unit of the Office of Mine Reclamation in the California Department of Conservation, which designs remediation strategies for abandoned mine lands. She was previously the Revegetation Specialist for the state, with the state-wide responsibility for reviewing revegetation plans for all mined lands. She was principal of a consulting firm for 10 years prior to entering state employment. Her firm specialized in revegetation of native habitats in northern California. She received her undergraduate degree in botany from U.C. Santa Barbara and her graduate degree in biology at Humboldt State University. Gail was the founding president of SERCAL (Society for Ecological Restoration, CA chapter) and regularly teaches SERCAL's class on revegetation/restoration planning, implementation and monitoring.

David Morrison. David is a co-author of the Cache Creek Resources Management Plan. As the Resources Management Coordinator for Yolo County, he oversees the Cache Creek Technical Advisory Committee and administers a variety of permitting, monitoring, and habitat restoration efforts. He previously worked as an environmental planner for Tulare County, where he was responsible for ensuring the adequacy of all CEQA documents prepared by staff and private consultants. David received his undergraduate degrees in economics and anthropology and a master's degree in city/regional planning from CSU Fresno.

VI. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

See non-discrimination form in Attachment E.

ATTACHMENT A. Map of Cache Creek Study Area



MAP 1: Proposed Study Area: Cache Creek between Rumsey and the Settling Basin

I-000938

ATTACHMENT B. Tables

TABLE 1. Cost Breakdown for Three Year Project

Project Phase and Task	Direct Labor Hours Applicant	Direct Salary and Benefits Applicant	Sub-Contract DOC	Sub-Contract Yolo Co.	Service Contracts CCC & CDF	Miscellaneous and Other Direct Costs	Total Costs
1. Project Manag/Coordin.						8000	8000
1.1	300	7902					7902
1.2	96	2529	9397				11926
1.3	100	2634	5339				7973
1.4	80	2107	2136				4243
2. Watershed Education	300	7902				7000	14902
3. Tamarix & Wildlife Docum.	264	6954		30000			36954
4. Reach Characterization							
4.1			4170				4170
4.2			2670				2670
5. Site Selection	100	2634	534	6500			9668
6. Permitting				3900			3900
7. Propagation of Native Plants			427		20000		20427
8. Tam. Eradica. Implementation							
8.1	10	263	1281	650			2204
8.2	24	632	2563				3195
8.3	150	3951	19220	9750	75000		107921

I-000940

Project Phase and Task	Direct Labor Hours Applicant	Direct Salary and Benefits Applicant	Sub-Contract DOC	Sub-Contract Yolo Co.	Service Contracts CCC & CDF	Miscellaneous and Other Direct Costs	Total Costs
9. Post-Implem. Monit. & Data Ev.							
9.1	160	4214	19220	3900	15000		42334
9.2	24	632					632
9.3	50	1317	10678	3250			15245
9.4	100	2634	2670	3250			8554
TOTALS	1758	46305	80305	61200	110000	15000	312810

Table 1. Cost Breakdown continued

Applicant = Cache Creek Conservancy
DOC = Department of Conservation, Office of Mine Reclamation
Yolo Co. = Yolo County, Community Development Agency
CCC = California Conservation Corps
CDF = California Department of Forestry

TABLE 1a. Total Budget Request

Total Direct Costs	**312,810**
Total Indirect Costs Overhead (10%)	**31,281**
TOTAL AMOUNT REQUESTED	**$344,091**

TABLE 2. Responsibility for Tasks Plus Beginning and Completion Dates

PROJECT PHASE/ TASK		RESPONSIBLE PARTY	START DATE	FINISH DATE
1. Project Management Coordination		Cache Cr.	01/98	12/00
2. Watershed Education		Cache Cr.	01/98	11/00
3. Vegetation *and Wildlife Documentation*		Yolo Co., Cache Cr.	01/98	12/00
4. Reach Characterization		DOC	03/98	05/98
5. Site Selection		Cache Cr., DOC, Yolo Co.	01/98	06/98
6. Permitting		Yolo Co.	06/98	09/98
7. Propagation of Native Plants		DOC	01/98	10/98
8. Tam. Eradication Implementation				
8.1	Final Experimental Design	DOC, Cache Cr., Yolo Co.	06/98	08/98
8.2	Pre-project Monitoring (Baseline)	DOC, Cache Cr., Yolo Co.	08/98	09/98
8.3	Treatment Implementation	DOC, Cache Cr., Yolo Co.	10/98	12/98
9. Post-Implementation Monitoring and Data Evaluation				
9.1	Quarterly Monitoring	DOC, Cache Cr., Yolo Co.	12/98	11/00
9.2	Wildlife Monitoring (analysis)	Cache Cr.	09/00	09/00
9.3	Data Analysis	DOC, Cache Cr., Yolo Co.	12/98	09/00
9.4	Data Eval. & Peer Review	Cache Cr., DOC, Yolo Co.	10/00	12/00

Cache Cr. = Cache Creek Conservancy
DOC = Department of Conservation, Office of Mine Reclamation
Yolo Co. = Yolo County Community Development Agency

The first organization listed under "Responsible Party" has the leading role, unless all type is the same size, which indicates they share equal responsibility.

ATTACHMENT C. Literature Cited

I-000943

Literature Cited

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Yolo County Community Development Agency. 1995. Technical studies and recommendations for the lower Cache Creek resource management plan.

ATTACHMENT D. Letters of Support

STATE CAPITOL
P.O. BOX 942849
SACRAMENTO, CA 94249-0001
(916) 445-8368
FAX (916) 327-9867

SOLANO COUNTY
555 MASON STREET, SUITE 275
VACAVILLE, CA 95688
(707) 455-8025
FAX (707) 455-0480

YOLO COUNTY
722-B MAIN STREET
WOODLAND, CA 95695
(916) 662-7867

helen.thomson@assembly.ca.gov

Assembly
California Legislature

HELEN THOMSON
ASSEMBLYWOMAN, EIGHTH DISTRICT

July 23, 1997

Ann Brice, Executive Director
Cache Creek Conservancy
34490 County Road 25
Woodland, CA 95695

re: tamarisk

Dear Ann,

I am pleased to write in support of the Conservancy's CalFed grant.

Cache Creek, which runs through the heart of Yolo County, plays an important role in regional resource planning. The riparian corridor associated with the creek is a critical link between the habitats of the Coast Range and those of the Sacramento Valley.

Tamarisk represents a threat to the native vegetation that exists along the creek. Additionally, significant potential exists for tamarisk to spread into the Yolo Bypass and affect the Yolo Basin Wetlands Project, as well as other downstream environments in the Sacramento-San Joaquin Delta.

As a member of the Yolo County Board of Supervisors, I was an active participant in the development of the Cache Creek Resources Management Plan (CCRMP), which encourages the removal of tamarisk to reduce threats to channel stability, and promotes the control of invasive species that inhibit the development of native riparian vegetation.

Now, as a member of the Assembly's Water, Parks and Wildlife Committee, I am concerned with protecting California's waterways and wildlife habitat. This project will enhance the ability of local organizations to effectively manage invasive species and to restore riparian vegetation.

I have long supported the Conservancy efforts and urge CalFed to give the Conservancy's tamarisk project fullest consideration and funding. If a representiative would like to discuss the project with me by phone, he or she may call Lupita Ochoa (445-8368) in my office to arrange a time.

Sincerely,

Helen M. Thomson

HT:ef

HELEN M. THOMSON

I —000946

County of Yolo

625 Court Street, Room 204 Woodland, California 95695 (916) 666-8195 FAX (916) 666-8193

July 22, 1997

Cache Creek Conservancy
Ann Brice, Executive Director
34490 County Road 25
Woodland, CA 95695

Dear Ann:

Yolo County actively supports the Conservancy in its proposal to control tamarisk and improve riparian habitat throughout the Cache Creek watershed. The County has enjoyed a productive relationship with the Conservancy on matters related to Cache Creek, and we welcome the opportunity to provide staff and GIS resources for this project.

The grant proposal supports the policies of the Yolo County Cache Creek Resources Management Plan (CCRMP), which encourages the removal of tamarisk to reduce threats to channel stability, and promote the control of invasive species that inhibit the development of native riparian vegetation. In addition, the County believes that environmental restoration efforts funded by CalFed must be accomplished on the basis of extensive stakeholder input. This project exemplifies this value, and illustrates the benefits that may be realized from cooperative ventures between local public agencies and non-profit groups.

The Board of Supervisors strongly encourages CalFed to provide funding for the Conservancy's project, and looks forward to continued participation in planning for the future of the Bay-Delta region. If you have any questions concerning the issues discussed in this letter, please contact David Morrison at (916) 666-8041. Thank you for your consideration.

Sincerely,

DAVE ROSENBERG
Chairman

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

REPLY TO
ATTENTION OF

July 22, 1997

Planning Division

Ms. Kate Hansel
CALFED Bay-Delta Program
1416 Ninth Street, Suite 1155
Sacramento, California 95814

Dear Ms. Hansel:

I fully support the effort of the Cache Creek Conservancy to control the invasion of *Tamarix sp.* in the Cache Creek watershed. Our December 1995 reconnaissance report, Cache Creek Environmental Restoration, California, indicated that *Tamarix sp.* is a nonnative invasive plant species that reduces channel floodflow carrying capacity, competes and replaces native plant species, reduces water supply to the native plant species and wildlife, reduces riparian habitat diversity, and changes the soil chemistry.

Eradication of the *Tamarix sp.* within the Cache Creek watershed is imperative to avoid serious problems in the Bay-Delta, San Joaquin River, and Sacramento River.

Sincerely

Walter Yep
Chief, Planning Division

Copy Furnished:

Ms. Ann Brice, Cache Creek Conservancy, 34490 County Road 25, Woodland, California 95695

UNIVERSITY OF CALIFORNIA, DAVIS

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO • SANTA BARBARA • SANTA CRUZ

COLLEGE OF AGRICULTURAL AND
ENVIRONMENTAL SCIENCES
AGRICULTURAL EXPERIMENT STATION
COOPERATIVE EXTENSION

WEED SCIENCE PROGRAM
DAVIS, CALIFORNIA 95616
(916)752-0612
FAX(916)752-4604

Ann Brice
Cache Creek Conservancy
34490 County Road 25
Woodland, CA 95696
phone/fax: (916)661-1070

23 July 1997

Dear Ann:

I would be happy to participate on the *Tamarix* control project on Cache Creek. I am willing to provide literature, consultation, and review manuscripts, techniques, and data. I am very pleased that the Cache Creek Conservancy is undertaking this project at a time when the creek can still be saved. In Southern California and other southwestern desert riparian areas, management strategies were implemented long after *Tamarix* infestations completely occupied these sites. The cost and difficulty associated with control and restoration have been immense. I believe that the Cache Creek Conservancy is taking appropriate steps to avoid these problems, as opposed to waiting until the creek in nearly overrun with saltcedar. I am happy to be a part of such a project.

Sincerely,

Joseph M. DiTomaso

Joseph M. DiTomaso
Non-Crop Weed Ecologist

Joseph M. DiTomaso • 210 Robbins Hall • Phone: (916) 754-8715 • FAX: (916) 752-4604 • E-mail: ditomaso@vegmail.ucdavis.edu

Yolo County Resource Conservation District
221 W. Court St., Suite 1 · Woodland, CA 95695
Phone (916) 662-2037 (916) 662-4876 FAX

July 16, 1997

Ann Brice, Executive Director
Cache Creek Conservancy
34490 Co. Rd 25
Woodland, CA. 95695

Dear Ann:

The Yolo County Resource Conservation District offers our full support for your *Tamarisk* control project on Cache Creek. Along with *Arundo donax*, this noxious weed has displaced miles of natural riparian and wetland habitat along the creek and has, arguably, exacerbated opposite bank erosion in some areas. The District is working hard in all county watersheds to promote activities that will restore healthy, biodiverse ecosystems, and Cache Creek is a critical waterway that suffers from years of deforestation, erosion, and re-population by these undesirable species.

Your planned documentation of the extent of the invasion will provide an important overview of the problem; this is a critical part of your education component. Demonstration sites will give local landowners and others working on control efforts first-hand experience on removal techniques and restoration with other species. Monitoring of natural plant colonization will determine the viability of this "no-cost" approach to restoration on the creek as it will show whether most sites are simply re-invaded. Desperately needed, the education program will create a coordinated approach to reach landowners and other support agencies to inform and support voluntary efforts in removing and replacing *Tamarisk* with biologically desirable and erosion-reducing species. Hopefully, as you reach out to landowners they will reach out to each other and create multi-parcel projects that save work, time, and dollars while speeding the process of creek-wide restoration. As *Tamarisk* invasion plagues many Western water systems, if successful, this model can easily be reproduced by many other groups as well.

We look forward to the opportunity to participate with the Conservancy and others on this important project.

Sincerely,

Tom Muller

Tom Muller,
Chairman

Document1 7/16/97

I-000950

YOLO COUNTY
FLOOD CONTROL &
WATER CONSERVATION
DISTRICT

July 25, 1997

RE: A Demonstration *Tamarix* Control Project in Cache Creek

To Whom It Concerns:

The Yolo County Flood Control and Water Conservation District strongly supports the request for grant funds as outline in the Cache Creek Conservancy's above referenced grant application.

Cache Creek is a major waterway, through Yolo County, which is a tributary to the Yolo By-pass, Sacramento River and the Bay/Delta. The creek is infested with *Tamarix* and has the potential to expand that infestation into the Yolo By-pass and the Delta. This proposal is to document the chacteristics of the *Tamarix* invasion, to implement control strategies, to analyze the effectiveness of those strategies, and to educate the community (private and public) about the impacts of *Tamarix* and the options available to address the issues that are associated with *Tamarix*.

In the long term, this proposal will develop the grassroots support needed to implement *Tamarix* removal from the creek by private landowners, organizations and agencies. It will provide them with the knowledge, understanding, and desire to make the decisions and take the actions necessary to eradicate *Tamarix*.

34274 State Highway 16
Woodland, CA 95695
(916) 662-0265
FAX (916) 662-4982

General Manager
James F. Eagan

Respectfully yours,

James F. Eagan

James F. Eagan
General Manager

1TAMARIX.WPD

I-000951

County of Yolo

70 COTTONWOOD STREET WOODLAND, CALIFORNIA 95695 (916) 666-8140

RAYMOND J. PERKINS
COUNTY AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES

July 24, 1997

David Morrison
Community Development Agency
292 West Beamer Street
Woodland CA 95695

Dear Mr. Morrison:

Subject: Grant Application for the Control of Tamarix

This letter is to serve as my support for the grant proposal to control Tamarix on Cache Creek.

It is my opinion that whatever can be done to control and/or eradicate the evasive Tamarix plant should be done.

If I can be of assistance in this matter, please feel free to contact me.

Sincerely,

Raymond J. Perkins
Agricultural Commissioner

clg

I-000952

STATE OF CALIFORNIA - THE RESOURCES AGENCY PETE WILSON, *Governor*

DEPARTMENT OF CONSERVATION
OFFICE OF MINE RECLAMATION
801 K Street, MS 09-06
Sacramento, CA 95814-3529
TEL: (916) 323-9198
FAX: (916) 322-4862
E-MAIL: omr@consrv.ca.gov

Telecommunications
For The Deaf
TDD (916) 324-2555

July 18, 1997

Dr. Ann Brice
Cache Creek Conservancy
34490 County Road 25
Woodland, CA 95695

RE: CALFED Proposal for *Tamarix* Control on Cache Creek

Dear Dr. Brice:

The Department of Conservation, Office of Mine Reclamation (OMR) would like to express its support for the Conservancy's proposal to CALFED entitled *Tamarix* Control on Cache Creek.

OMR has been involved with Cache Creek since 1976 through the Surface Mining and Reclamation Act, because of the extensive gravel mining in the watershed. One significant issue of reclamation on these instream mines is that of encroachment by exotic plant species, largely *Tamarix*. The eradication protocol that will be provided by this project will help to mitigate past impacts and will prevent future impacts to the remaining native riparian habitat along the creek.

This letter constitutes a commitment by OMR to provide to the Conservancy the staff expertise as outlined in the proposal. We look forward to the information that this project will generate and to working with the Conservancy.

Please contact me at (916) 323-9198 if we can be of further assistance to you in facilitating this project.

Sincerely,

Dennis J. O'Bryant
Assistant Director

I —000953

I-000953

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Clear Lake Resource Area Office
2550 North State Street
Ukiah, CA 95482-3023

July 23, 1997

To:

CALFED
Bay-Delta Program

Dear Sir/Madame:

The purpose of this communication is to inform your office that the Bureau of Land Mangement is fully supportive of the proposal by the Cache Creek Conservancy for Tamarix control on Cache Creek.

This office remains an active Cache Creek Stakeholder, managing lands in the upper Cache Creek watershed, where the intrusion of Tamarix continues to be a growing concern. The Bureau is in the process, through the land exchange program, of acquiring an additional 11,000 acres, to include a large segment of Bear Creek, an important drainage in the Cache Creek watershed. As this perennial water flow has been extensively invaded by tamarix, the Bureau eagerly anticipates the results of the proposed demonstration projects in this grant to guide the Bureau in tamarix removal.

Again, the Bureau personnel in this office and throughout California are staunch supporters of this grant proposal, the results of which are to be implemented for future management of tamarix on Public Lands.

Sincerely,

Philip L. Damon
Acting Area Manager

I-000954

YOLO LAND TRUST
P.O. Box 1196 * Woodland, CA 95776 * (916) 759-0908

To: CALFED - Bay Delta Grant Program
From: David Scheuring, YLT President
Date: July 22, 1997
Re: Cache Creek Conservancy Grant Application

On behalf of the Yolo Land Trust, I would like to encourage your favorable consideration of the Cache Creek Conservancy's grant application for "*Tamarix* Control on Cache Creek: A Demonstration Removal, Revegetation, Monitoring and Education Project."

I have read the Conservancy's Executive Summary for the grant application and believe that the project is well thought out, well designed, and will be effective. The project leaders are well qualified to conduct a scientifically controlled demonstration project and well connected for developing educational outreach and enlisting further support.

Tamarix poses a very significant threat to the Cache Creek ecosystem and has the potential for spreading into other areas of Northern California including the Delta. This most noxious of invasive species crowds out native species, degrades habitat values, and contributes to rebound creekside erosion and flooding in areas impacted by its presence. If nothing is done to control tamarix invasion, the problem will inevitably grow worse.

The Yolo Land Trust was founded nine years ago to help protect the land resources of Yolo County. We strongly endorse the efforts of organizations such as the Cache Creek Conservancy that work toward similar goals. We hope you will look favorably upon the Conservancy's application and fund the project to its full extent.

AMERICAN LAND CONSERVANCY

456 Montgomery Street, Suite 1450 • San Francisco, California 94104 • Telephone 415-403-3850 FAX 415-403-3856

July 11, 1997

Ann Brice, Executive Director
Cache Creek Conservancy
34490 County Road 25
Woodland, CA 95695

Dear Ann:

This letter is sent in support of the Cache Creek Stakeholders proposal to CALFED for funding of a demonstration project to control tamarisk infestations throughout the Cache Creek Watershed.

We are very concerned about tamarisk infestations along Bear and Sulphur Creeks in the upper watershed, and look forward to having the benefit of your research to guide us as we look for ways to deal with this increasing problem. We would welcome a collaboration with your group to continue the program when you complete the demonstration project.

I look forward to hearing your reports at the Cache Creek Stakeholders meetings.

Sincerely,

Nancy Stryble
Director of Development

ATTACHMENT E. Non-discrimination Form

I-000957

Item 8

ONDISCRIMINATION COMPLIANCE STATEMENT

MPANY NAME

Cache Creek Conservancy

The company named above (hereinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990 (a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, denial of family and medical care leave and denial of pregnancy disability leave.

CERTIFICATION

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I am fully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California.

FICIAL'S NAME

Ann Brice

ATE EXECUTED

July 26, 1997

EXECUTED IN THE COUNTY OF

Yolo

ROSPECTIVE CONTRACTOR'S SIGNATURE

Ann Brice

ROSPECTIVE CONTRACTOR'S TITLE

Executive Director

ROSPECTIVE CONTRACTOR'S LEGAL BUSINESS NAME

Ann Brice

I-000958